

**IN THE UNITED STATES BANKRUPTCY COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

<b>In re:</b>  <b>CORE SCIENTIFIC, INC., <i>et al.</i>,</b>  <b>Debtors.<sup>1</sup></b>	<b>§ § § § § § §</b>	<b>Chapter 11</b>  <b>Case No. 22-90341 (DRJ)</b>  <b>(Jointly Administered)</b>
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**DECLARATION OF RUSSELL CANN IN SUPPORT OF  
THE EMERGENCY MOTION OF DEBTORS FOR ENTRY OF INTERIM  
AND FINAL ORDERS (I) AUTHORIZING THE DEBTORS TO (A) OBTAIN  
REPLACEMENT SENIOR SECURED NON-PRIMING SUPERPRIORITY  
POSTPETITION FINANCING AND (B) USE CASH COLLATERAL, (C) PAY OFF  
EXISTING POSTPETITION FINANCING FACILITY, (II) GRANTING LIENS  
AND PROVIDING CLAIMS WITH SUPERPRIORITY ADMINISTRATIVE  
EXPENSE STATUS, (III) GRANTING ADEQUATE PROTECTION TO THE  
PREPETITION SECURED PARTIES, (IV) MODIFYING THE AUTOMATIC STAY,  
(V) SCHEDULING A FINAL HEARING, AND (VI) GRANTING RELATED RELIEF**

I, Russell Cann, pursuant to section 1746 of title 28 of the United States Code, hereby declare under penalty of perjury that the following is true to the best of my knowledge, information, and belief:

1. I am Head of Mining and Executive Vice President at Core Scientific, Inc. (“Core,” “Core Parent,” and together with its subsidiaries and affiliates, the “Company”). I have served in this capacity, or similar, since February 2018. Prior to joining the Company, I grew and developed a blockchain and cryptocurrency mining business. I previously worked for Accenture

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<sup>1</sup> The Debtors in these chapter 11 cases, along with the last four digits of each Debtor’s federal tax identification number, are as follows: Core Scientific Mining LLC (6971); Core Scientific, Inc. (3837); Core Scientific Acquired Mining LLC (N/A); Core Scientific Operating Company (5526); Radar Relay, Inc. (0496); Core Scientific Specialty Mining (Oklahoma) LLC (4327); American Property Acquisition, LLC (0825); Starboard Capital LLC (6677); RADAR LLC (5106); American Property Acquisitions I, LLC (9717); and American Property Acquisitions, VII, LLC (3198). The Debtors’ corporate headquarters and service address is 210 Barton Springs Road, Suite 300, Austin, Texas 78704.

in the areas of financial technology and risk management. I graduated cum laude from the South Carolina Honors College and the Moore School of Business.

2. I make this declaration in support of the *Emergency Motion of Debtors for Entry of Interim and Final Orders (I) Authorizing the Debtors to (A) Obtain Replacement Senior Secured Non-priming Superpriority Postpetition Financing, (B) Use Cash Collateral, and (C) Pay Off Existing Postpetition Financing Facility (II) Granting Liens and Providing Claims with Superpriority Administrative Expense Status, (III) Granting Adequate Protection to the Prepetition Secured Parties, (V) Modifying the Automatic Stay, (V) Scheduling a Final Hearing, and (VI) Granting Related Relief* (the “**Motion**”).<sup>2</sup> Except as otherwise indicated herein, all facts set forth in this declaration are based on my experience and personal knowledge of the Debtors’ operations and finances, information learned during the course of my employment, along with review of relevant documents, or information that I have received from the Debtors’ management team, the Debtors’ advisors, or employees of the Debtors working directly with me or under my supervision, direction, or control. If called upon to testify, I could and would competently testify to the facts set forth in this declaration on that basis.

### **The Company’s Bitcoin Mining Operations**

3. Headquartered in Austin, Texas, the Company is one of the largest blockchain infrastructure, hosting provider, and digital asset mining companies in North America, with approximately 814MW of capacity across eight operational data centers in Georgia (2), Kentucky, North Carolina (2), North Dakota, and Texas (2).

4. The Company mines digital assets for its own account (“**Self-Mining**”) and hosts digital mining equipment for other companies and provides related services. Since inception,

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<sup>2</sup> Capitalized terms used but not defined herein shall have the meaning ascribed to them in the Motion.

the Company has built a considerable asset base and gained market trust as a premier hosting provider.

5. The Company owns over approximately 150,000 specialized computers that include application-specific integrated circuits (“**ASIC Miners**”) it uses in connection with its Self-Mining operations.

6. Miners power and secure blockchains by solving complex cryptographic algorithms to validate transactions on specific digital asset networks. A miner “mines” digital assets by adding blocks to the blockchain—mapping an input data set consisting of the existing blockchain, plus a block of the most recent digital asset transactions and an arbitrary number called a “nonce,” to an output data set of a predetermined length using the hash algorithm. Solving these algorithms, or “solving or completing a block,” results in a reward of digital assets, such as bitcoin. The rewards of digital assets can be sold profitably when the sale price of the digital asset exceeds the direct costs of “mining,” which generally consist of the costs of mining hardware, electrical power to operate the machine, and other facility costs to house and operate the equipment.

7. Mining processing power is generally referred to as “hashing power.” A “hash” is the computation run by mining hardware in support of the blockchain. A miner’s “hash rate” refers to the rate at which it is capable of solving such computations per second. Miners with higher rated hash rates when operating at maximum efficiency have a greater chance of completing a block in the blockchain and receiving a digital asset reward. Thus, increased revenues from digital asset mining are impacted not only by fluctuations in bitcoin prices, but also by increases in the bitcoin blockchain’s network hash rate resulting from the growth in the overall quantity and quality of miners working to solve blocks on the bitcoin blockchain and the difficulty index associated with the secure hashing algorithm employed in solving the blocks. It is because an

increase in bitcoin prices usually results in an increase in the difficulty of successfully mining for bitcoin given the increase in competition of entities running machines to reap the higher prices, that better maintained and efficient machines, like those at Core, are very valuable. In short, because an increase in bitcoin prices does not correlate directly to a one-to-one increase in revenue, more efficient and better maintained machines help capture more of that value.

### **ASIC Miners' Market Value**

8. ASIC Miners are regularly bought and sold on the open market. Luxor Technology Corporation (“**Luxor**”) tracks market data on the pricing of ASIC Miners and each week prepares a report, which presents weekly average pricing of the North American secondary Bitcoin ASIC Miner market sorted by different metrics, such as brands, models, hash rate, and order sizes. It is common for industry participants to use Luxor’s market data to track pricing trends for ASIC Miners.

9. Several factors impact the condition and lifespan of an ASIC Miner. While ASIC Miners typically have an average lifespan of three to five years<sup>3</sup>, the expected lifespan may be extended by running a miner under optimal conditions or shortened by running a miner in harsh conditions.

10. A miner’s hash rate reflects its computational power and speed. As a miner deteriorates, its hash rate will likely decline. Some mining companies “overclock” their ASIC Miners by running them at higher hash frequencies and voltages to solve blocks on the bitcoin blockchain faster. Overclocking ASIC Miners consumes more power, generates more heat, and

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<sup>3</sup> In the past, as chip technology progressed, the release of a new model of ASIC Miner would devalue older generations of ASIC Miners because each new generation of chips provided significant efficiency gains compared to previous generations. However, as a result of the advanced chip technology that is currently available, efficiency gains from newer generations of chips have decreased to the point that the release of a new chip will not displace or significantly devalue a previous model of ASIC Miner, particularly when such ASIC Miners are well-maintained.

shortens the expected lifespan of the machines as compared to those run at stock settings. The Company does not overclock any of its ASIC Miners that are financed or leased. Rather, the Company sets each of these ASIC Miner's frequency and voltage at the levels suggested by the manufacturer and does not sacrifice chip quality or lifespan for a potential short-term boost in hashing productivity. This serves to extend the lifespan of the miners and maintain their value.

11. In addition to monitoring the hash rate for each of its ASIC Miners, the Company tracks its miners' "uptime"—the total amount of time that a miner has been run—as well as their temperatures to ensure that the miners are not being overworked or overheated, which could shorten the lives of the machines.

#### **The Company's Facilities**

12. ASIC Miners are susceptible to extreme temperatures and environmental contaminants. Extreme cold can crack chips, extreme heat can burn chips, and dust and dirt gradually degrade a miner's functionality and decreases its lifespan.

13. The Company has specifically engineered its facilities to maximize and maintain its ASIC Miners' longevity. The Company designs each facility for the specific types of ASIC Miner to be used there, and makes any necessary modifications based on the miners' electrical, air flow, and filtration requirements. The Company spends approximately *double* what is typical in the industry on its infrastructure that houses its ASIC Miners. This long-term investment drastically reduces the need to replace ASIC Miners due to environmental factors and increases their lifespan.

14. The Company takes additional precautionary steps to care for its ASIC Miners based on environmental conditions. For example, if the temperature outside the Company's facilities rises above certain thresholds, the Company uses cooling mechanisms such as fan walls

and water walls to lower the temperature of the miners' intake air. If the outside temperate reaches an even higher threshold, the Company automatically ceases operation of its ASIC Miners to prevent them from potentially overheating.

15. Some bitcoin miners use a technique called immersion cooling, or liquid submersion cooling, to help prevent overheating. This process involves submerging mining rigs in a thermally conductive liquid bath, typically dielectric oil. While the immersion process helps dissipate heat from the mining equipment, it typically requires the dismantling of the machine hardware, thus voiding the manufacturer warranty, and substantially depletes an ASIC Miner's resale value. The Company does not use immersion cooling for any of its ASIC Miners that have been financed or are subject to equipment leases. Rather, the Company preserves the future resale value of these ASIC Miners through its substantial investment in its facilities, its risk mitigation procedures, and its industry-best maintenance and repair capabilities.

#### **The Company's Maintenance and Repair Capabilities**

16. The Company employs a top-of-the-line maintenance and repair program for its ASIC Miners, including those that are financed or subject to leases, which helps ensure the equipment remains in excellent working condition and retains its resale value. The Company runs constant diagnostic testing each day on its ASIC Miners and has the capability of being able to repair or replace *any* parts of its ASIC Miners on site.

17. Among other things, the Company's proprietary "Minder" software has the ability to report the hash rates and temperatures of each individual ASIC Miner. The hash rate reports indicate the efficiency of each ASIC Miner over a 24-72 hour period. Minder provides updated metrics every ten minutes, which helps ensure the equipment is running optimally.

18. In addition to analyzing hash rate data from each individual ASIC Miner, the Company cross-references this data with hash rate data the Company receives from its bitcoin “mining pool”—a network of distributed bitcoin miners who pool their resources together to collectively mine blocks and then distribute payments based on each entity’s contribution to the pool. The Company uses the largest bitcoin mining pool in the world, Foundry. The Company’s Minder software compares the hash rate data from its individual machines with the data it receives from the Foundry pool. If there is a discrepancy between the hash rate data measured in-house and the data received from Foundry, Minder flags the specific ASIC Miner with the discrepancy and the Company deploys its in-house technicians to determine the cause of the discrepancy and correct it. In this way, the Company uses third-party verification to identify potential issues with its ASIC Miners as they arise, thereby ensuring their integrity and extending their lifespans and overall value.

19. While ASIC Miners can be modified with certain third-party software to potentially improve their short-term performance, such third-party software can infect ASIC Miners with malware or bugs and cause other performance issues. Additionally, installing this type of third-party software voids the manufacturer’s warranty, which would decrease the equipment’s resale value. Accordingly, the Company does not install third-party software on any of its ASIC Miners that are financed or leased. Rather on these financed or leased ASIC Miners, the Company runs the manufacturer’s recommended software and only upgrades to new versions of the manufacturer’s software after extensively testing the new versions to ensure their functionality and reliability. Following such testing, the Company runs up-to-date software provided and approved by the manufacturer on each of these ASIC Miners.

20. The Company has the unique ability to repair or replace any components of its ASIC Miners onsite. The Company's technicians are available around the clock, year-round, to ensure that any necessary repairs are handled quickly.

21. In addition to being able to replace parts like power supply units, fans, and control boards, the Company's engineers have the ability to replace chips on faulty hash boards with original equipment manufacturer chips. This rare capability sets the Company apart from the vast majority of mining companies across North America and ensures that each of the Company's ASIC Miners continues to perform at virtually the same level as a new machine from the factory.

22. Based on the factors identified above, the Company's ASIC Miners will continue to remain at or near the same condition as if they were new, for the foreseeable future, and likely at least until the next bitcoin "halving" event in March 2024, which by design will cut the reward for mining bitcoin in half and reduce the inflation rate by the same amount.

I hereby declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Austin, Texas

Dated: January 31, 2023

By: /s/ Russell Cann  
Russell Cann